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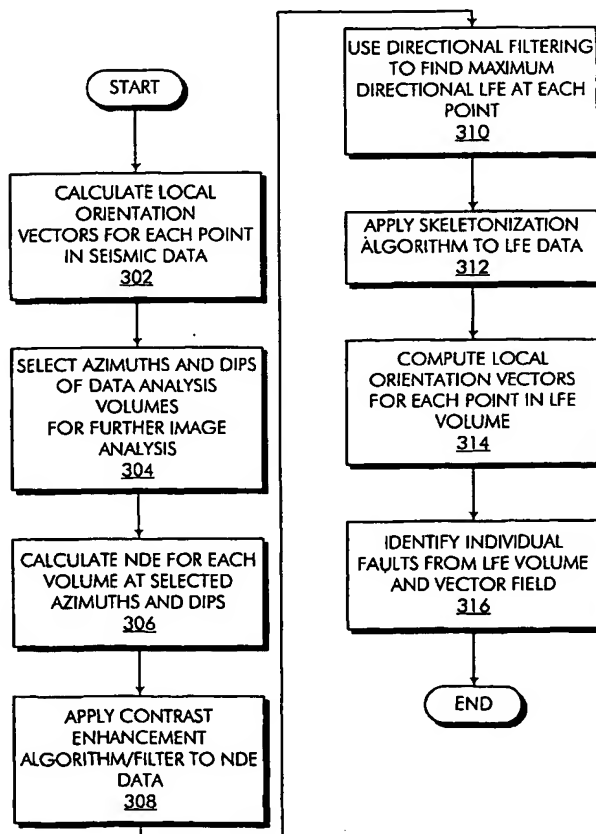
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(54) Title: METHOD AND APPARATUS FOR SEISMIC FEATURE EXTRACTION



(57) Abstract: A method and apparatus for seismic image processing is disclosed. A preferred embodiment aids in the identification of subterranean faults, which are significant in hydrocarbon exploration. The method includes steps of: a) reading a three dimensional seismic data volume; b) computing the three-dimensional orientation of the subsurface; c) subdividing the original volume into small data volumes that are rotated at a predetermined set of dips and azimuths related to those of the subsurface orientation; d) computing a 3-D edge detection measure on the small volumes formed in step c; e) performing a 3-D contrast enhancement operation in each of the small volumes; f) filtering the result of the contrast enhancement with selected 3-D filters at the predetermined set of dips and azimuths; g) skeletonizing the results of the filtering operation; h) separating the individual fault surfaces, and i) labelling the individual fault surfaces for further interpretation and exploration.

WO 2004/044615 A2